

dormancy of harvested corms and then initiation of floral buds. Dormancy of freesia corms are breaking by storage at 30 °±2 °C for 10-13 weeks and insure rapid uniform shoot emergence when planted. If corms are not breaking dormancy, it will be pupation after planting. Pupation, known as a morphological process of formation of small corms on the old one where shoot emergence does not occur after planting. The depth of dormancy of freesia corms depends on harvesting time. Freesia corms were harvested with two different time, 30days late and immediately after cut flower. The harvested freesia corms were stored for 100days at 5°, 10°, 15°, 20°, 30 °C. Corms harvested immediately after cut flower those of pupation were inhibited by stored at 30 °C for more than 80days in “Yvonee” and stored at 20 °C for more than 100days or 30 °C for more than 60days in “Shiny Gold”. Corms harvested 30days late after cut flower those of pupation are inhibited by stored at 20 °C for more than 100days or 30 °C for more than 40days in “Yvonee” and “Shiny Gold”.

502.424

Effects of Modified Atmosphere Packaging and Cold Storage on Browning and Quality of *Flammulina velutipes*

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Browning is one of the most important problems in *Flammulina velutipes* which directly resulted in quality deterioration and limited the processing and marketing. However, there is little study on the storage of *Flammulina velutipes* presently. Effects of modified atmosphere packaging and cold storage on the browning and quality of *Flammulina velutipes* were investigated with a view to provide a scientific basis for flammulina preservation technology. Research studied the changing principle of browning degree, PPO activity, POD activity, weight loss, total sugar content and decay rate were measured in flammulina with MA packaging at (0±1) °C for 15d. The results indicated that activities of PPO and POD increased, weight loss and total sugar degraded, browning and decay rates are relatively high, and quality declined in the postharvested flammulina after 15 days of storage. MA packaging and cold storage could inhibit the increases in activities of PPO and POD and weight loss and total sugar degradation, and reduce significantly browning and decay rates, which indicated that MA packaging and cold storage could maintain the quality of flammulina.

502.425

Short-Term Pulsing Treatments with Salicylic Acid Improved Postharvest Life of ‘Yellow Island’ Cut Rose

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Several pulse treatments with salicylic acid was tested for effectiveness to delay flower senescence in cut rose cv. Yellow Island. Flower stems were pulsed for 14 hours before transferred to distilled water. Vase life, water uptake, fresh weight, flower diameter, protein content, lipid peroxidation and proline concentration were determined in different intervals. The result exhibited that salicylic acid pulse treatment significantly improved the vase life as compared the distilled water. The pulse solution containing 150 mg/L salicylic acid together with 3 % Sucrose and 200mg/l 8-Hydroxyquinoline sulfate the maximum vase life (9.62 days) as control (5.87 days). Protein content was highest at harvest time, thereafter decreased gradually during senescing of rose petal. In contrast, increasing in lipid peroxidation and proline amino acid accumulation may be due to senescence-associated oxidative damage to petals. Salicylic acid treatment prevented declining protein content and suppressing lipid peroxidation and proline amino acid accumulation in rose flower.

502.426

Physical and Chemical Characterization of Blood Orange Produced in the Organic System

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In Brazil, the orange characterized by intense red color of the pulp and juice, is called the blood orange (*Citrus sinensis*). The color and intensity are dependent on many factors, mainly the climate of the region where they are grown. The objective was to evaluate the physical and chemical characteristics of blood oranges grown under organic crop management. The fruits were harvested in July 2009 from São José do Vale do Rio Preto-RJ (22°13'39.0" S, 42°54'48,1" O), 733m above sea level, with 19 °C average annual temperature. After that, the fruits were taken to the postharvest physiology laboratory at Embrapa Food Technology. There were performed the following analyses: average weight, volume of juice, juice yield, pH, total titratable acidity, total soluble solids, vitamin C, fructose, glucose, sucrose, total sugars, skin color and pulp color. The results obtained for the average fruit weight was 99.94 ± 6.25g. The volume of juice was 34.58 ± 5.28 mL with 0.34 ± 0.03% of juice yield. The pH average of fruits was 3.87 and the total titratable acidity was 0.75 ± 0.02 % of citric acid. The average of total soluble solids contents was 10.95°Brix. The average contents of vitamin C, fructose, glucose, sucrose and total sugars were respectively 757.33 ± 91.47mg×L⁻¹, 416.17 ± 77.37mg×L⁻¹, 7.17 ± 2.71mg×L⁻¹, 2.37 ± 0.20g×L⁻¹ and 423.33 ± 77.36mg×L⁻¹. The results for the skin color were: L* 69.06 ± 0.99, a* 15.73 ± 1.62*, b* and 72.60 ± 1.45 and E 101.53 ± 1.53 while the color of the pulp presented L* 59,98 ± 1,30, a* 4,63 ± 1,55, b* 31,51 ± 2,24 e E 20,26 ± 7,95.

502.427

Physical and Chemical Characterization of Persian Lime Fruit Produced under Organic Crop Management

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People always say about the superior quality of organic fruit, but there are no search results that confirm this statement. In order to answer this question, it was proposed this work to evaluate physical and chemical characteristics of the Persian Lime (*Citrus aurantifolia*), in the laboratory of Postharvest Physiology at Embrapa Food Technology Center, Rio de Janeiro. Fruits were harvested in two maturation stages (green and yellow) at the end of June 2009. It was evaluated the total soluble solids content, total titratable acidity, pH, instrumental color, firmness, vitamin C, total sugars content, fructose, glucose and sucrose. The average weight of fruits at the yellow maturation stage was 146.29 ± 13.94g and 150.22 ± 11.61g in the fruits with a green shell. The results of the skin color were: L*=74.99±1.59, a*=-3.00±1.29, b*=66.18±2.32, E=95.98±2.19 and L*=71.90±1.71, a*=-4.56±0.44, b*=61.87±1.49, E=95.98±3.09, for fruits at the maturation stage yellow and green, respectively. The average of total soluble solids content, total titratable acidity and pH were: 7.38±0.30°Brix, 0.07±0.005 mg×100g⁻¹ of citric acid and 5.97±0.07 for yellow fruits, and 7.50±0.14°Brix, 0.067±0.010mg×g⁻¹ of citric acid and 5.80±0.010 for green fruits. The total sugars content in the yellow limes were 557.00±283.42mg×100g⁻¹. The contents of fructose, glucose and sucrose were 530.0±278.60 mg×100g⁻¹, 27.0±7.44 mg×100g⁻¹ and 0.36±0.07 mg×100g⁻¹, respectively. The vitamin C contents were 345.75±82.02mg×100g⁻¹ and 386.25±38.03, mg×100g⁻¹ for yellow and green limes.